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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,210	12/04/2003	David Herbert Roach	CL2248USNA	7968
23906 7590 10/24/2007 E I DU PONT DE NEMOURS AND COMPANY LEGAL PATENT RECORDS CENTER BARLEY MILL PLAZA 25/1128 4417 LANCASTER PIKE WILMINGTON, DE 19805			EXAMINER SCHILLING, RICHARD L	
			ART UNIT 1795	PAPER NUMBER
			NOTIFICATION DATE 10/24/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-Legal.PRC@usa.dupont.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/728,210	<b>Applicant(s)</b> ROACH ET AL.	
	<b>Examiner</b> Richard L. Schilling	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 68-77, 79, 80 and 110-123 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 68-77, 79, 80, 110-123 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 68-71, 74-77, 79, 80 and 110-123 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification fails to disclose normal or inverted gate triodes comprising multiple layers of positive photopolymer of the same size. The gate, dielectric, cathode and emitter layers are not disclosed in the specification as being of the same size. The triodes in the specification ( pg 14-16 ) are made using elements with positive photoresist layers, including elements with multiple positive photoresist layers, but the elements with multiple positive photoresist layers are not disclosed as being of the same size if the instant claims are intended to be directed to photopolymer elements for making gate triodes instead of the triodes finally made. Figure 1 shows that the gate triodes made have different size elements. The specification at pg 16, lines 12-30, disclose coating a positive photopolymer and forming a resist and then overcoating the resist with a second photopolymer layer of the same size as the first but this process is not either an element with multiple photopolymer layers or the gate triodes made therefrom. Also, the only gate layers in gate triodes disclosed in the specification are silver gates. In regard to claims 74 and 117, carbon nanotubes are not disclosed as being in gate triodes.

2. Claims 68-71, 74-77, 79, 80 and 110-123 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are indefinite as to whether photopolymer elements for making gate triodes or the gate triodes made, which would not contain the photopolymers after the disclosed firing in the specification, is intended to be claimed. The gate triodes disclosed in the specification definitely do not have electrode, emitter, gate and dielectric elements of the same size.

3. Claims 68-71, 74, 75, 79, 80, 110-118 and 121-123 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bouchard et al. in view of Imai et al. and Cernigliaro et al. for the same reasons as set forth in paragraph 6 of the first office action filed 6-27-07. Bouchard et al ( paragraphs 48-50 ) disclose elements with multiple photopolymer layers for forming normal gate triodes and inverted gate triodes. Even though Bouchard et al. is silent as to photopolymer layer sizes, the photopolymer layers could obviously be of the same size by varying, in each layer, the content of particles which would remain after firing to produce gate, electrode and dielectric elements. Also, after firing to remove photopolymer material, the triodes formed in Bouchard et al. and applicants' specification would essentially be the same so that Bouchard et al. discloses gate triodes made that may be covered by the instant claims.

4. Claims 68-77, 79, 80 and 110-123 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bouchard et al. in view of Cengiliaro et al. and Imai et al. further in

view of Anderson et al., Thackery et al. and Hanabata et al. for the same reasons as set forth in paragraph 7 of the first office action.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Richard L. Schilling at telephone number 571-272-1335.

RICHARD L. SCHILLING  
PRIMARY EXAMINER  
GROUP 1100 1795

